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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,443	09/04/2001	Michiel Jacques van Nieuwstadt	200-1758 JDR	9487

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FORD GLOBAL TECHNOLOGIES, INC  
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EXAMINER

NGUYEN, TU MINH

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 08/12/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Advisory Action

Application No.  
09/682,443

Applicant(s)  
Michiel Jacques Van Nieuwstadt

Examiner  
Tu M. Nguyen

Art Unit  
3748



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED Aug 5, 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid the abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

## THE PERIOD FOR REPLY [check only a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see NOTE below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
see ATTACHMENT
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_
- Claim(s) objected to: \_\_\_\_\_
- Claim(s) rejected: 1 and 4-11
- Claim(s) withdrawn from consideration: \_\_\_\_\_
8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

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## ATTACHMENT

1. An Applicant's Request for Reconsideration filed on August 5, 2002 has been considered.  
Overall, claims 1 and 4-11 are pending in this application.

### *Response to Arguments*

2. Applicant's arguments with respect to the references applied in the previous Office Action have been fully considered but they are not persuasive.

Re claim 1, in response to applicant's argument that King et al fail to disclose injecting the hydrocarbon into the engine exhaust in accordance with detection of a light-off event, the examiner respectfully disagrees.

Similar to the pending application, King et al. also have an upstream temperature sensor (50) and a downstream temperature sensor (52) to detect a light-off event in the catalyst (40). The examiner is still convinced that with this temperature sensor configuration, King et al. must detect a temperature increase across the catalyst in order to determine whether or not there is a light-off event in the catalyst. The general comment made by King et al. on lines 19-30 of column 3 is also accepted by those in the art with regard to a catalyst light-off event. That is, a light-off temperature of a catalyst is usually in the high temperature range. Of course, a light-off event is a strong function of many variables such as the deteriorated level of a catalyst, type of rich components in the exhaust gas, etc. Typically, a light-off event occurs at a higher temperature

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with higher deteriorated level of the catalyst. Also a light-off event occurs at a lower temperature with more active rich components such as hydrogen.

In addition, King et al. also detect a light-off event in a catalyst by utilizing upstream and downstream NO<sub>x</sub> sensors to measure the percentage of NO<sub>x</sub> in the exhaust gas that is converted or eliminated by the catalyst (lines 34-38 of column 3). This method is also accepted because a light-off event is formally defined as an event where at least 50% of a particular species (NO<sub>x</sub>, HC, or CO) in the exhaust gas that has been converted.

Re claims 5-11, in response to applicant's argument that Hirota et al. fail to determine an exothermic condition temperature at an output of the catalyst when the temperature difference is determined to exceed the threshold, the examiner again respectfully disagrees. As clearly shown in Figure 14, Hirota et al. detect a temperature difference ( $\Delta t$ ) indicating an exothermic reaction across the catalyst (step 608), comparing the temperature difference with a predetermined temperature threshold ( $\Delta T_i$ ) (step 610), and determining an exothermic condition temperature ( $T_2$ ) at an output of the catalyst when the temperature difference is determined to exceed the threshold (zero) (step 614, Figure 17). In Hirota et al., the threshold is zero so that any deviation between  $\Delta t$  and  $\Delta T_i$  would result in a calculation of a desired exothermic condition temperature ( $T_2$ ) at an output of the catalyst (see step 614 and Figure 17) and a calculation of a new reductant injection (see step 618 and Figure 18).

Applicant further alleges that the examiner's interpretation of Hirota et al. appears to be incorrect. The examiner respectfully disagrees with this allegation. The examiner believes himself to possess a sufficient understanding of Hirota et al. to examine the pending application. The

*apply it against*

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examiner further believes that the sketch made by applicant on Hirota et al. on page 8 of Applicant's Request for Reconsideration is partially accurate. The sketch fails to show a a desired exothermic condition outlet temperature (T2) which is clearly shown as step 614 in Figure 14 of Hirota et al. This temperature T2 is the same as T\_LO in the pending application. Furthermore, T\_LO\_EXP\_GREEN in the pending application is what Hirota et al. designates as 550 in Figure 17.

*Communication*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623. The fax phone number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

*Tu M. Nguyen*

TMN

August 12, 2002

Tu M. Nguyen

Patent Examiner

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